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ABSTRACT

Many researchers have studied predictors of adolescent substance use. One important predictor of substance use is the quality of the parent-child relationship. Most studies address the parent-child relationship unidimensionally. This study hypothesized that it is not use of a particular substance that can be predicted from a poor parent-child relationship, but use of the most advanced substance that children are at risk to use at that developmental period. This study examined risk to use drugs, rather than actual drug use, as the outcome measure and explored the association between components of the parent-child relationship and risk for substance use 1 year later among nonusing young adolescents. Subjects were seventh graders and their participating parents, including 272 nonusers of tobacco and 437 nonusers of marijuana at the beginning of the study. Factor analysis identified the parental relationship and risk-to-use factors, which provided constructs for causal modeling. Analyses were conducted separately for tobacco and marijuana use. The parental relationship constructs did not predict later use of tobacco. One parental relationship construct, emotional closeness, predicted later risk to use marijuana. Emotional closeness with parents, including physical signs of affection, appeared to serve a role in preventing young adolescents from later marijuana use. (Author/ABL)

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PARENTAL RELATIONSHIP AND ADOLESCENT SUBSTANCE USE RISK: HUGS NOT DRUGS

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ABSTRACT

This paper presents a prospective analysis on the quality of the relationship between seventh-grade adolescent nonusers of substances and their parents, and the adolescents' subsequent risk to use substances one year later. Factor analysis identified parental relationship and risk to use factors, which provided constructs for causal modeling. We conducted analyses separately for marijuana and cigarette smoking. As expected, the parental relationship constructs did not predict later risk to use cigarettes. One parental relationship construct, Emotional Closeness, predicted later risk to use marijuana. Emotional closeness with parents, including physical signs of affection, appears to serve a role in preventing young adolescents from later marijuana use.

Parent-Child Relationship and Young Adolescent Substance Use Risk

Many researchers have studied predictors of adolescent substance use. One important psychosocial predictor of substance use is quality of the parent-child relationship (Margulies, Kessler, and Kandel, 1977; Brook, Whiteman, and Gordon, 1982; McCubbin, Needle, and Wilson 1985; Stein, Newcomb, and Bentler, 1987). Most studies address the parent-child relationship unidimensionally. Exceptions are the works by Brook et al., (1981, 1982) and Baumrind (1987). In Brook's work, parental affection is a consistent predictor of lower level drug use, while other aspects, such as discipline or paternal expectations, are not.

Kandel (1980) has found that the effect of the parent-child relationship on adolescent substance use differed by substance. Kandel's work, done with high school students, suggested that a poor parental relationship was related to use only for the hardest drugs, such as heroin or barbituates. Brook, Whiteman, and Gordon (1982) similarly found with high-school students that the parent-child relationship distinguished marijuana users from hard illicit drug users, but did not distinguish marijuana users from users of less illicit drugs (e.g., cigarettes).

Based on these studies, we hypothesize for the current study that it is not use of a particular substance that can be predicted from a poor parent-child relationship, but use of the most advanced substance that children are at risk to use at that developmental period. Among junior high school students, the parent-child relationship should predict risk to use marijuana, but not risk to use a less illicit smoked drug, tobacco, because marijuana at this time is the most advanced substance likely to be used by adolescents to any significant extent. A second prediction is that the emotional closeness of the parent-child relationship will be a stronger predictor than other aspects of the relationship, including authoritative or behavioral components.

This study will examine risk to use drugs, rather than actual drug use, as the outcome measure. Studying risks for onset of drug use at a later time may prove fruitful for preventive purposes. Risk factors that lead to later onset serve appropriately as proxies to actual use (Chassin, Presson, Bensenberg et al., 1981), as long as they do in fact predict later use. This study will determine the association between components of the parent-child relationship and risk for later substance use among nonusing young adolescents.

Method

Subjects

Subjects were seventh-graders in the Los Angeles area and their parents who were participating in a health promotion program at their schools. The sample consisted of 657 students matched with participating parent. Of these, there were 272 (41%) self-reported lifetime nonusers of tobacco at the beginning of the study and 437 (66%) nonusers of marijuana. Only two students reported any lifetime use of cocaine; use of other illicit drugs was also extremely low. Lifetime nonuse means that the student has never tried the drug in question at all.

Males comprised 50.5% of the nonsmokers and 48.1% of the nonusers of marijuana, compared to 51% of the total sample, indicating a slight underrepresentation of males among the marijuana nonusers. Approximately three-quarters of the participating parents were mothers. The overall student sample was 63.5% White, 18.1% Hispanic, 11.5% Asian, and 3.5% Black. Ethnic composition among marijuana nonusers was similar to the total sample, while Hispanics were somewhat more likely and Asians somewhat less likely to have smoked tobacco.

Procedure and Materials

Parents and students completed separate anonymous questionnaires at separate locations (Table 1). Risk to Use items included tobacco and marijuana questions separately. Parents and students completed the questionnaires at two time points, referred to as Year 1 and Year 2, at the beginning of the 1986 and 1987 school years.

Insert Table 1 About Here

The questionnaire items tapped various aspects of the parent-child relationship, including affective, behavioral, and authoritative components. The test-retest reliability was .60 for the student questionnaire and .59 for the parent questionnaire. These figures seem quite acceptable given that the testing occurred one year apart. The student questionnaire also tapped various risk factors identifed from previous research, including intention to use substances, friends' use, and curiosity about use. Items consisted of four or five point scales, reverse scored where appropriate.

Results

Factor Analysis

Principal components analyses resulted in seven factors for each substance, based on criteria of eigenvalues greater than one and scree tests (Table 1). Both orthogonal and oblique rotations resulted in similar solutions, but the simple structure of the oblique solution was clearer. Thus, we used the oblique solution for the development of causal model constructs.

The analysis resulted in five parental relationship factors: Emotional Closeness (EC), Behavioral Closeness (BC), Parental Monitoring (PM), Parental Perception of Conflict (PC), and Parental Perception of Togetherness (PT) (Table 1). These factors corresponded, respectively, to emotional, behavioral, and authoritative components, plus two factors assessing the parental perceptions of the relationship. One Risk to Use factor (R1 and R2 for Years 1 and 2, respectively) resulted. The seventh factor consisted of one or two residual items depending on the substance in question; it was not included in the causal models. The factor analysis of tobacco use risk accounted for 65.4% of the variance, and the factor analysis of marijuana use risk accounted for 64.3% of the variance.

The items that composed the Risk to Use factor at Year 1 predicted self-reported actual substance use at Year 2. Substance use at Year 2 was low, but nevertheless the correlations were significant for marijuana ($R=.22$, $p<.001$), and tobacco ($R=.28$, $p<.001$). Thus, the Risk to Use construct is an appropriate indicator of later drug use.

Causal Modeling

The purpose of the factor analyses was to establish the structure for LISREL causal modeling. Where causal model constructs (such as Risk to Use) are estimated from two or more related indicators (i.e., items), factor loadings serve as the best measures of these constructs (Biddle and Marlin, 1987). LISREL models provide for the estimation of relationships among the hypothesized constructs, and can determine if data are consistent with prespecified causal relationships (Joreskog and Sorbom, 1981). We constructed LISREL models separately for cigarettes and marijuana because the factor structures were not equal across substances. We also conducted models separately for each parental relationship construct, because a saturated model with all five parental relationship constructs required too many estimates for a stable model. We used the maximum likelihood estimation method to model each parental relationship construct at Year 1 as a predictor

of Risk at Year 2, controlling for Risk at Year 1. The parental relationship constructs also predicted Risk at Year 1.

The models fit the data well, as evidenced by the Goodness of Fit indices greater than .9 (Joreskog and Sorbom, 1981), and by the non-significant chi-square values (Table 2). Non-significant chi-squares indicate that the models are accurate representations of the data and cannot be rejected. In all cases, the stability coefficients between R1 and R2 indicated good reliability.

Insert Table 2 About Here

Greater Emotional Closeness at Year 1 predicted less Risk to Use marijuana at Year 2, even after controlling for Risk at Year 1 (standardized B = -.170, t = -2.103, $p < .05$). The standardized beta between EC and Risk at Time 2 was still significant after reversing the direction of the link between R1 and EC. No other parental relationship constructs were significantly related to risk.

EC as a predictor of Risk for marijuana use at Year 2 was a necessary part of the model. After eliminating the link between EC and R2, a significant decrement in fit of the model resulted (X^2 change = 4.64, df = 1, $p < .05$). There was poor fit of this revised model to the data, evidenced by a significant total chi-square value ($X^2 = 60.41$, df = 43, $p < .05$). Thus, the link between Emotional Closeness and later Risk to Use marijuana is necessary to describe adequately the data.

Discussion

The results support the hypothesis that the parent-child relationship would not be a significant predictor of adolescents' risk to use cigarettes. One aspect of the parent-child relationship, emotional closeness, predicted risk to use marijuana. These findings support Kandel's (1980) contention that the parent-child relationship is more important for harder drugs, but adds that the particular drug does not seem to be as important as the relative severity of that drug for a given age group. Interpreted from a developmental perspective, a poor parent-child relationship places the adolescent at risk for drug use that is developmentally non-normative for adolescents of that age. Intention to use or actual use of cigarettes may be a relatively less deviant behavior, while risk to use marijuana at this young age indicates a more serious parent-child disturbance.

Emotional Closeness consisted mainly of items from the student questionnaire. Student perceptions of the relationship with their parents, as this relates to their own perception of risk, is more important to ascertain than parental perceptions of the relationship. Factors measuring parental perceptions of closeness or conflict were not good predictors of risk. Other aspects of the parent-child relationship seem to be less important as well, including doing things together (behavioral closeness) or parental monitoring of the child's comings and goings.

We did not investigate the four possible mother-father-daughter-son combinations, as the decreased sample sizes would not have been sufficient to support the LISREL models, and because the research question was not addressed to that point. Questions asked of students concerned both parents, not just the one participating in the study. Future research can clarify sex-related effects of the parent-child relationship with respect to substance use risk.

The lack of many significant findings may in part be due to the low levels of risk among these students at both time points. However, the one significant finding was consistent with our theoretical expectation, although we did not explicitly predict that emotional closeness would be the only significant predictor. Emotional closeness between parent and child served to protect against marijuana use risk. This finding takes the work of Brook et al., (1981, 1982), namely, that affection and warmth between parent and child are barriers to substance use, and extends it to young adolescents before use has even begun. A logical question is whether risk may be reduced simply by giving the adolescent affection and emotional support, or whether there are other temporally predecent, unmeasured qualities of the parent-child relationship tapped by this construct that are more fundamental causal mechanisms. Further research may explore the roots of a good emotional relationship between parent and child that protect against later drug involvement.

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Table 1

Student (S) and parent (P) questionnaire items, and factor analyses loadings.

Factor	Substance	
	Tobacco	Marijuana
Emotional Closeness (EC)		
How often do your parents give you a hug or a kiss? (S)	.772	.773
How often do your parents criticize you? (S)	.564	.539
How often do your parents give you praise or encouragement? (S)	.614	.601
How often do you give your child a hug or a kiss? (P)	.639	.646
Behavioral Closeness (BC)		
How often do you and your parents do things together that you both enjoy? (S)	.659	.676
How often do you and your parents help each other with work around the house? (S)	.704	.718
How often do you eat dinner with your parents? (S)	.720	.697
Parental Monitoring (PM)		
When you go out, how often do your parents ask you where you are going? (S)	.817	.807
When you go out, out often do you tell your parents where you are going? (S)	.698	.687
How often do your parents stop you from going out with your friends? (S)	.580	.586
Parental Perception of Conflict (PC)		
How often do you argue with your child? (P)	.842	.831
How frequently does your child do something that makes you unhappy? (P)	.829	.830

Table 1 (continued)

Parental Perception of Togetherness (PT)		
How often do you and your child help each other with work around the house? (P)	.759	.775
How often do you and your child do things together that you both enjoy? (P)	.751	.765
How often do you give your child praise and encouragement? (P)	.754	.733
Risk to Use (R1 and R2)		
Honestly, do you think you would like to try smoking (tobacco/marijuana)? (S)	.797	.800
Do you ever imagine yourself smoking (tobbaco/ marijuana)? (S)	.764	.799
I will probably use (tobacco/marijuana) in the next couple of months. (S)	.435	.300
How many of your best friends use (tobacco/ marijuana)? (S)	---	.473

Table 2

Causal models: links between parental relationship constructs and Risk to Use at time 2, controlling for Risk to Use at time 1.

Tobacco (N=272)	B_2	B_1	B_{R1-R2}	GFI	X^2	df#	p
EC	.023	-.058	.599*	.983	23.02	29	.78
BC	-.137	-.187	.613*	.984	20.03	21	.52
PT	-.082	.109	.593*	.988	14.98	21	.82
PM	.001	-.053	.599*	.977	29.49	21	.10
PC	-.151	.132	.551*	.991	8.40	9	.49
Marijuana (N=437)							
EC	-.170**	.082	.620*	.980	55.77	42	.08
BC	-.057	-.042	.605*	.983	41.44	34	.18
PT	-.069	.172	.624*	.982	43.53	34	.13
PM	-.086	-.010	.615*	.981	46.44	35	.09
PC	-.168	.098	.617*	.984	35.98	26	.09

* $t > 2.00$, $p < .05$

** $t = -2.103$, $p < .05$

\# Fewer degrees of freedom reflect fewer indicators per construct, as well as estimates of correlated residual terms. Many such estimates were required to fit the tobacco models, few to fit the marijuana models.

B_2 Standardized beta from parental relationship construct to R2

B_1 Standardized beta from parental relationship construct to R1

B_{R1-R2} Standardized beta from R1 to R2 (stability coefficients)

GFI Goodness of fit index for model

X^2, df, p Chi-square statistics for model (nonsignificant p values indicate failure to reject the models as accurate representations of the data)

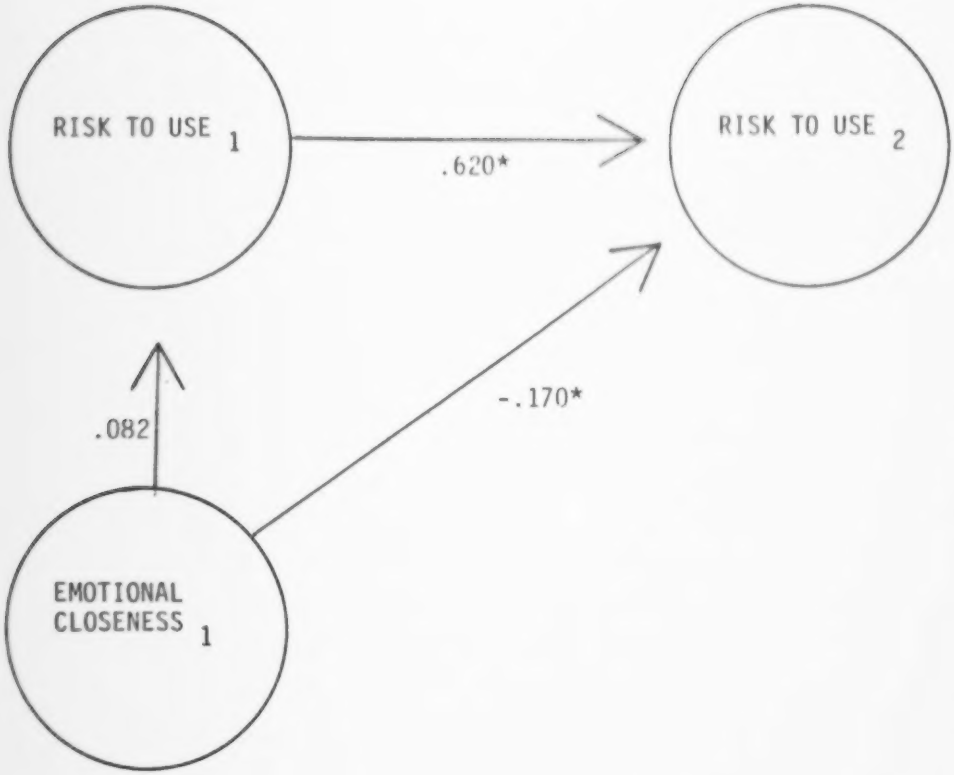

FIGURE 1
EMOTIONAL CLOSENESS BETWEEN PARENT AND CHILD PREDICTS RISK FOR MARIJUANA USE ONE YEAR LATER

* $p < .05$